

REMARKS

Claims 12, 15, 16, 21, 23-25, 29 and 35 have been amended to improve form and claims 13, 14, 27, 28 and 36 have been canceled without prejudice or disclaimer. Claims 12, 15-26 and 29-35 are now pending in this application.

Claims 12, 17, 18, 20-23, 25, 26, 30, 31 and 33-35 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Brotman et al. (U.S. Patent No. 5,917,889; hereinafter Brotman) in view of Carter et al. (U.S. Patent No. 4,608,460; hereinafter Carter); and claims 13-16, 19, 24, 27-29, 32 and 36 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Brotman in view of Carter and further in view of Riskin (U.S. Patent No. 5,031,206). The rejections are respectfully traversed.

Claim 12 recites a method for interpreting input that includes receiving a dual tone multi-frequency (DTMF) key sequence over the telephone interface and determining a constrained recognition grammar to recognize a set of utterances, wherein each utterance of the set has an associated alphanumeric string identifier that maps to a DTMF sequence that is equivalent to the DTMF key sequence. Claim 12, as amended, also recites determining an order associated with the set of utterances based on a weighting factor and playing a first audio message over the telephone interface to solicit a voice input, the first audio message comprising the set of utterances in the determined order. Similar features were previously recited in claims 13 and 14.

The Office Action admits that the combination of Brotman and Carter does not disclose determining an order associated with a set of utterances based on a weighting factor, but states that Riskin discloses this feature and points to column 6 of Riskin for support (Office Action – page 7). Riskin at column 6 discloses that sender 10 may type a message using DTMF telephone buttons (col. 6, lines 1-23). Riskin at column 6 further discloses that a prompter function in telephone

access node 12 may determine the most likely word for the DTMF input and that speaker 48 provides the most likely word to the sender. If the most likely word is not correct, sender 10 will deny the guess and speaker 48 speaks the next most likely word (col. 6, lines 24-68). Therefore, Riskin does not disclose playing a first audio message to solicit a voice input, wherein the first audio message comprises a set of utterances in a determined order which is based on a weighting factor. In contrast, Riskin merely discloses playing a single guess associated with a DTMF input to a user and waiting for the user's confirmation before providing another guess.

Therefore, the combination of Brotman, Carter and Riskin does not disclose or suggest playing an audio message that comprises a set of utterances in the determined order, as required by claim 12.

In addition, even if, for the sake of argument, the combination of Brotman, Carter and Riskin could be fairly construed to disclose or suggest each of the features of claim 12, the applicants assert that the motivation to combine these references does not satisfy the requirements of 35 U.S.C. § 103. For example, the Office Action states that it would have been obvious to combine Brotman and Carter to improve the convenience of Brotman by notifying the user of appropriate selectable responses (Office Action – page 3). The Office Action further states that it would have been further obvious to modify the combination of Brotman and Carter with the weighting factor of Riskin to improve the system's efficiency by predicting selectable strings based on their frequency (Office Action – pages 7-8).

The applicants assert that both of these alleged motivations for combining the cited references are merely conclusory statements providing alleged benefits of the combination. Such motivation does not satisfy the requirements of 35 U.S.C. § 103. While all three references may involve systems that receive DTMF inputs, all three references are directed toward different

problems. For example, Riskin is directed toward identifying words and letters entered on a DTMF keypad using the frequency of use of words in the entire English language to determine the most likely input. Brotman and Carter, in contrast, are not at all related to using a listing of words and their frequency of use in the English language to identify user input. The applicants assert that the only motivation for combining portions of Brotman, Carter and Riskin comes from the applicants' disclosure and is based on impermissible hindsight. That is, the applicants assert that the Office Action is combining unrelated portions of various references in an attempt to reconstruct the applicants' invention using a reverse engineering approach. Such an approach is not appropriate and does not satisfy the requirements of 35 U.S.C. § 103.

For at least these reasons, withdrawal of the rejection and allowance of claim 12 are respectfully requested.

Claims 15-20 are dependent on claim 12 and are believed to be allowable for at least the reasons claim 12 is allowable. In addition, these claims recite additional features not disclosed or suggested by the cited art.

For example, claim 16 recites that the weighting factor comprises access frequency associated with each of the set of utterances. The Office Action states that Riskin discloses this features and points to column 6 for support (Office Action – page 8). The applicants respectfully disagree.

As discussed above, Riskin at col. 6 discloses determining a likely word corresponding to a DTMF input based on the frequency of use of various words in the English language. Determining a likely word based on frequency of use of words within the English language is not equivalent to determining an order based on access frequency associated with each of a set of utterances, as recited in claim 16.

For at least these additional reasons, withdrawal of the rejection and allowance of claim 16 are respectfully requested.

Claim 19 recites that processing the voice input using the constrained recognition grammar to determine a matching element of the set comprises favoring a more frequently selected element of the set over less frequently selected elements of the set when determining the matching element. The Office Action states that Riskin discloses this feature and points to col. 6 for support (Office Action – page 8). The applicants respectfully disagree.

Riskin at column 6 does not disclose the use of constrained recognition grammars, much less that determining a matching element of a set of utterances includes favoring a more frequently selected element of a set of utterances when determining a matching element, as required by claim 19.

For at least these additional reasons, withdrawal of the rejection and allowance of claim 19 are respectfully requested.

Claims 21, 25 and 35, as amended, recite features similar to, but not identical to claim 12. For reasons similar to those discussed above with respect to claim 12, withdrawal of the rejection and allowance of claims 21, 25 and 35 are respectfully requested.

Claims 22-24, 26 and 29-34 variously depend on claims 21 and 25. These claims are believed to be allowable over the cited art for at least the reasons their respective independent claims are allowable. In addition, these claims recite additional features not disclosed or suggested by the cited art.

For example, claims 24 and 32 recite features similar to, but not identical to claim 19. For reasons similar to those discussed above with respect to claim 19, withdrawal of the rejection and allowance of claims 24 and 32 are respectfully requested.


CONCLUSION

In view of the foregoing amendments and remarks, the applicants respectfully request withdrawal of the outstanding rejection and the timely allowance of this application.

To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 50-1070 and please credit any excess fees to such deposit account.

Respectfully submitted,

HARRITY SNYDER, L.L.P.

By: 
Glenn Snyder
Reg. No. 41,428

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11350 Random Hills Road
Suite 600
Fairfax, VA 22030
Telephone: (571) 432-0800
Facsimile: (571) 432-0808